3: Barrett E-5 (1908-1909)1925
SD6 Cayapa SD6

The conditions prevailing in this high interior valley offer great contrast with those under which the Cayapa now live, not only as to topography, but also as to climate, natural resources, modes of travel, the nature of their habitations, the food supply, and in various other particulars. 133

Climate

The climatic conditions of the territory of the Rio Cayapas are typically tropical. The temperature is equable throughout the year, the maximum day temperature ranging, so far as it was possible to determine, between 70° and 85° Fahrenheit.[1] Rains are of almost 132

[1] "The temperature at night ranges from 65 to 75 degrees Fahr., on cloudy days from 70 to 80 degrees Fahr., and on sunny days from 75 to 87 degrees. The latter degree I have experienced but twice in seven or eight months' residence. . . . . Although almost directly under the equator, that burning equatorial heat and those malignant fevers of which we read, are here unknown. The cause of this salubrious climate is the moisture-laden current which, sweeping by the Gallapagos islands, reaches this portion of the Ecuadorian coast and deposits its moisture as it strikes the slopes of the Andes. The clouds shield the country from the direct rays of the sun, the copious rains wash the country clean, the snows furnish cooling water, while constant evaporation tempers and cools the air."—Extract from the report of the engineer to the United States Gold Dredging and Rubber Company, on the Rio Santiago. This report was based on observations made during 1895–96. A report made by another engineer of the same company for the month of May, 1901, gives the night temperature as ranging between 60°–67°F., and the day temperature as ranging between 65°–74°F. The daily rainfall is given in this report as ranging from 0.81 inch to 0.87 inch.

3: Barrett E-5 (1908-1909)1925
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132 daily occurrence, although the year is divided into a so-called wet season and a so-called dry season. The former corresponds to the fall, winter, and spring months, and the latter to the summer months of the North Temperate zone. At all times, however, this particular region is bountifully supplied with rain, although it is only a short distance north of the more arid portions of the western coast of South America. Beginning with the region about the Rio Esmeraldas, the rainfall rapidly decreases toward the south, and save in a few exceptional areas the territory becomes correspondingly more arid. Even at such a short distance as Manabi the aridity is very noticeable, and still farther to the south, on the Peruvian coast, the country is very arid. To the north, on the other hand, as far as southern Mexico, the rainfall is very abundant, and in some sections may even exceed in volume that of the Cayapa region.

It was not feasible on the present expedition to carry apparatus for measuring the precipitation exactly, but according to systematic observations[2] made during the first three months of 1895, in April, 1896, and again in May, 1901, on the Rio Santiago, a few miles distant from the Rio Cayapas, and a part of the same drainage system, the daily precipitation ranged from .81 inch to .87 inch, or a total annual precipitation of from 24.63 to 26.46 feet. If data were available for every month of the year, it is not improbable that these figures would be found to vary. Further, if obser-

[2] See Note 1, page 3.

3: Barrett E-5 (1908-1909)1925
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vations extending over a series of years were available, it would probably be found that the precipitation varies considerably from year to year. For instance, according to reports the winter months of 1909–10 were attended by an unprecedented rainfall. On the whole, therefore, it is safe to assume that the observations of the engineers referred to represent a fair average of the precipitation of this region.

In consequence of the great rainfall and the constant saturation of the ground, floods are frequent along all the rivers of this region. These freshets come, of course, only when there is a continuous and an unusually heavy fall of rain for several hours, or, as sometimes happens, for several days. In the latter event the Rio Cayapas rises several feet at its mouth, which is itself upward of a mile wide, and where the lowness of the bordering lands permits the stream to spread over wide areas. Farther up-stream, where the hills confine its waters, the river rises much higher; and at some points, where for considerable distances there are no low flood-plains and where the banks are steep, it rises as high as fifty feet.

As a result of such conditions there has been developed a form of pile-dwelling, the floor of which is raised from six to twelve feet above the ground. The Cayapa always endeavor to build their houses as near the river as possible, on account of their dependence on it as a means of travel and for other purposes. The floods, however, must always be taken into account in selecting a site even for such a pile-dwelling, since at times of such

3: Barrett E-5 (1908-1909)1925
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floods it not infrequently happens that the waters rise so high as completely to surround the house, and indeed sometimes to within a few inches of its floor.

The excessive rainfall naturally produces great humidity,[1] which would be very oppressive were it not for the fact that the sky is almost constantly overcast, so that the full power of the sun is rarely felt in the region. This fortunate circumstance renders the climate, which would otherwise be almost intolerable, very equable and pleasant.

RESOURCES

TREES AND PLANTS

By virtue of the climatic conditions above set forth the vegetation of the Cayapa region is typically tropical. Almost every foot of ground is covered by a dense jungle growth comprising many species of trees, palms, shrubs, and smaller plants, and characterized by an abundance of vines and parasitic vegetation. So dense is this growth that it is practically impossible to travel on land even a short distance without the use of a machete.

Among the most important and characteristic plants of the region are the various species of palms, many of which are put to use by the Cayapa in one way or another. In the following list of the trees and plants of this section are given the Cayapa and the local Spanish names of those palms which are most useful to the

[1] One of the engineer's reports, above referred to, places the humidity at an average of about 80 per cent.

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angle with the Río Santiago, and together they make up the second largest drainage system in the northwestern part of the province of Esmeraldas. The confluence of the two rivers lies approximately at 1°5' north latitude, or about 90 miles due north of the equator, and 78°59' west longitude. The area is a tropical rain forest because of the very cold Humboldt Current that flows along much of the Ecuadorian coast, however, extremely dense clouds usually cover the area as far inland as the foothills of the Andes, and moderate the temperatures. They range from 65° to 75° Fahrenheit at night and from 70° to 90° during the daytime, depending upon the amount of cloud cover. Generally, the sky is a very bright overcast. When the cloud cover lessens, the sky is an intense hot blue. There are no weather stations in the Río Cayapas area, and consequently we have no readings of any significance. Barrett (1925:4) estimated the annual rainfall on the Río Santiago at between 24.63 feet to 26.46 feet. Since the distances between the Río Santiago and the Río Cayapas are not very great, Barrett's observations may reasonably be applied to the Cayapa area as well.

The low alluvial coastal area of the Cayapas-

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of the Cayapa and the Negroes of the area. The extreme humidity of the region, coupled with the saturated, heavy clay soil that predominates, precludes slash and burn cultivation. The Cayapa region is just on the very southern edge of the area marked by a peculiar diagnostic trait:

> . . . slash-mulch cultivation, of probable Indian origin, has evolved. Seeds are broadcast and rhizomes and cuttings are planted in an uncleared plot; then the bush is cut; decay of cut vegetable matter is rapid, forming a thick mulch through which the sprouts from the seeds and cuttings appear within a week or ten days (West 1957: 129).

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The main food crops are maize /pĩ̀ũ/, plantain /pánda/, sugar cane /éla/, sweet manioc /kúʔ͡ʧu/, Rascadera (Xanthosoma sagittifolium), a taro-like aroid tuber called /túa/, squash /ú/, pineapple /ʧ̃ilʸa/, beans /mílu/, and bananas /seda/. The latter were universally considered to be starvation food, and prior to the recent world market demand for them, were fed to the pigs. There are many fruits such as papaya /papíʲya/, oranges /lánsa/, lemons /límo/, zapote /sapúte/, guabo /ʃ̃ilʸu/, chirimoya (A. cherimola). Some sweet potatoes are grown, but they are scarce due to the depredations of

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